NFB Pacific & Yukon Centre

Proposal for NFB Production

"Earth Moves Revisited"
(a <u>redevelopment</u> of previously developed material)

**AUTEUR ANIMATION
ANIMATED DOCUMENTARY
February 27, 2009**

Director: Stephen Arthur

In reference to
project-specific demonstration material:
5 scripts,
5 storyboards,
3D animated demo clip (15 sec.)

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TOPSHEET SYNOPSIS: Re-develop and re-purpose, as a five-minute auteur film, educational material fully developed eight years ago by exhaustive subject-matter research, scripts, storyboards, and production process analysis (3D CGI). The animated film will depict the radical transformations of the Canadian landscape as a simulated time-lapse journey over 250 million years. The intension is to provoke a spiritual experience, as a mythic story told by a modern shaman, presented as an immersive spectacle of grandeur, beauty, and contemplative mystery. Stephen Arthur was director of the NFB film *Transfigured* (animated transformations of the paintings of Jack Shadbolt, 1998).

1. A Re-Development Project

Introduction to the subject matter

Imagine a rapidly transforming North American continent captured on film in super-fast time-lapse that spans millions of years of geological time every second. It's a continuous, real event, seen at such a large time scale that it looks like nothing we've seen or even imagined before. No narration. No diagrams. Continents split apart at bulging rift faults, then crash together to build all of our mountains. The mountains melt from erosion, the surface flows, colours shift like aurora borealis as the climate changes or asteroid impacts cause mass extinctions. Huge inland seas invade and retreat. Giant chains of volcanic islands smash into and override the mainland to add new land to our continent. Massive ice sheets pulse across the country dozens of times, carving out the Great Lakes. The Earth itself is alive.

I have already developed this scenario in painstaking detail, for maximum relevance and dramatic impact, in the submitted demo material—scripts, storyboards, and 3D-CGI maquette video (15 seconds). A synopsis of this original subject-matter is given at the end of this proposal.

Intention: a five minute auteur film

I want to condense and illuminate the original five-film concept to create a new, five-minute auteur animation film.

My vision comes from being a fine-art animator with extensive knowledge of pure science. I'm always intimately linked to a massive, beautiful, multileveled morphological structure that few people can see. I want to draw the audience into my sense of wonder, passion, and transcendent awe, by way of this particular scenario, the transforming landscape, to induce in them a true spiritual experience. To do this, I need to help viewers "complete the gestalt," so to speak, ensuring they are rewarded by the very pattern completed in their own minds from the incomplete given. In this way I intend to act as a kind of "shaman" for the modern world.

Although this material was originally developed for the classroom, the act of changing the scale of things in space and time reveals something deeper. As Joseph Campbell said, "Your life is broader and deeper than you conceive of it here." I want the new film to extrapolate to your life: perhaps a sense of the "prime mover" beneath it all, or a sense of being part of a larger organism: Gaia, enduring as a homeostatic whole in spite of the ephemeral, shimmering, simmering patina of individual lives. Perhaps this Earth Mother is also the Terrible Mother. Gaia is at once benign, sustaining, and terrible, in that we are not essential to its well-being.

The original storyboards are factually accurate in every detail—but without explanations. Each film in the series was to be a mysterious *riddle*, to be explored and answered with the help of the teacher. To transform this material into a true auteur film, I want to re-develop both the aesthetic expression and the story structure. Some possible approaches are suggested below.

2. Cinematic Elements

The demo clip submitted is merely a crude maquette to convey the general concept and treatment. It does not come close to illustrating the high quality intended.

Musical score

A musical score that works like the Phillip Glass score for *Koyaanisqatsi*, for example, could be crucial.

Spectacular beauty

I see this film having the impact of an IMAX film. I want to bring out the grandeur, immersing viewers in scenes they could normally never be part of. Therefore this auteur film should omit most of the full-earth imagery (reducing the time period by half, see storyboards), and strive to find ways to express the height of landforms from lower angles. We also need variation in scale (intimate and delicate versus huge and powerful) and the thrill of contrast from scene to scene. This will be a challenge for a subject based on a continuous time-line. More close-up inserts (and models) will be needed. In addition to dramatic spectacle, the feel could be more contemplative and mysterious like *Koyaanisqatsi*, Ron Fricke's *Chronos*, or segments from Mettler's *Picture of Light*.

Dance

A dance creates an apparition of active powers, a dynamic image, a virtual entity. Can this material be *choreographed* by selective staging, editing, timing, and scale?

Artistic rendering

Possibilities include:

- The aesthetic of "averaging": In Ron Fricke's *Chronos*, the slow play of light in time-lapse across monumental scenes often includes the ephemeral passing of crowds of people. He used a very long shutter speed to stretch out and blur any quick movements. This averaging effect of motion blur can smooth the quickly-changing surface details, making it more phantom-like, more pleasing, even painterly.

- Pixilated contrast: At strategic points in the film (or in one "channel" throughout), we could work against the concept of spectacular beauty with

details that bring out the more surreal, uneasy feeling found in normal fast-shutter time-lapse or pixilation (stop-motion) films. Time-lapse effects include unstable light, spotty shifts and blips, random cloud cover, and coastlines fluttering like butterflies (see demo clip). The uncanny feeling of pixilation can be brought out by using a very low frame rate, such as 6 fps (which incidentally will greatly reduce rendering time). Pixilation is a type of movement that can humanise the universe of inanimate objects.

- Create details using vector-based paint tools that can paint onto 3D models.

- Find ways to express the forces that drive it all, without having to show cross-sections into the Earth (see Competitive Film Search), such as with expressive use of coloring, synch sounds, or even subtle squash-and-stretch.

- Find ways of creating *characterizations* in the landform components (see Mythic Narrative, below). Even consult a character designer!

- Rotoscope it: print out frames of 3D wireframe animation for an animation artist to sketch or paint upon, depicting the whole thing in handmade fine-art animation.

- Present it stereoscopically.

Consulting Production Designer

As with story structure, the more collaboration on art direction, the better.

Orienting graphics

What would be the effect of superimposing present day geographic and political borders?

Camera plunges below the surface

This could happen at strategic times to depict what's pushing everything.

3. Story

Movement tends to imply and demand motivation. That's why animation so readily turns from art to cartoon, from an object to an animal with a story. A static picture can have a static symbolism, but a moving picture needs a narrative. It has to have a development, and with animation it generally needs a development based on individual motivations rather than a "hand of God." So to make this material work, it could be deliberately composed in a way that allows motives for the parts, or provides an outer meta-story.

Mythic narrative

Joseph Campbell said that the new myth to arise in modern times will be about the planet as a whole. Myth comes from the stages of birth, dependency, maturity, aging, and death, offering clues to the experience of life. Mythological images and actions refer to something within the viewer, as though the viewer were the source. Because myth is about metamorphosis rather than dramatic conflict-and-resolution, a mythic narrative might be more suitable for this film than a conventional framing drama. For example:

- Can we use something like the unifying role of the butterfly iconography in *Transfigured* (see Director's Reel)? In that film the butterfly images went through an odyssey of rebirths throughout the film, while remaining only a component of the overall theme of structure opposing flux.

- Can we collaborate with a First Nations storyteller to develop a new myth to be narrated and to inform the structuring of the film? The storyteller could then be a character in a framing story as well (see below).

Framing story

To derive pleasure from the art of scientific discovery, just as in the other arts, viewers must be able to re-live, to some extent, the creative process—induced to make some of the fundamental discoveries themselves, to experience in their own minds some of those flashes of insight that have lightened its path. This can be facilitated by a framing meta-story, or by a curiosity-based interactive expansion (section 4).

NOTE: Characters used to frame the animation within a story could be created entirely in voice over.

Characters in the film

- Find a way to make the subject integral to the life of the live-action characters that start and end each film in the existing storyboards and scripts. This live action extension could lengthen the film up to eight minutes without seriously affecting the budget.

- How about time travelers arguing, joking, or puzzled about what they're seeing? — "What are those vibrating white pulses? Really? The ice ages really did *that*? I had no idea." Characters could be in the scene, or shown as silhouettes, or in a separate split screen, or by audio only.

The film could depict what the characters imagine as they figure it out, by inserting shots of the forces beneath that are causing all this to happen, or shots of animals that walked the Earth then, and so on.

Alternative soundtracks

Instead of the music track, the viewer could play the film with a voice and SFX track that identifies and explains the events in a real-time commentary. This method could also be used for story characters (as above).

Split screen (or layers, or intercut)

Illustrate in synchrony with the changing landforms:

- the evolution of life forms
- extinction events
- forces below the surface
- climate change

Consulting Story Editor

The guidance of a top-notch story editor could help strip everything away from a story except the minimum needed to carry it, then carefully add elements back to ensure that everything deepens the resonance with that core story. A story editor could also help find what kind of iconic or evocative imagery or scene might be needed to set up the context at the start. Other questions could be answered: Is narration needed, and if so, how can it be done in a non-didactic way? How can we maintain an open-ended meaning, so that a wide range of people can identify with it?

4. Interactive Expansion

We could satisfy the viewer's curiosity in the following ways:

- popup windows or labels
- hotspots with clips of plate tectonics or life at that time
- the ability of the viewer to slide the film back and forth in time to re-orient and "feel" the forces

Partnering with Google Earth for Location Based Media

Google is likely to provide developers and programmers to help integrate the animation into Google Earth, and to possibly use their proprietary SketchUp 3D terrain tool, which might actually be useable for production of the NFB film itself.

In addition, other kinds of locative media can be related to this project, such as location-based mapping of vegetation through time as the climate changed over the last 15,000 years.

With location-based services, any person with a mobile phone can selectively play back parts of the animated film based on their current location, marking where their land position came from, or where their current global position is relative to the changing landscape.

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5. Synopsis of the Original Material (15 minutes)

The submitted scripts and storyboards were created for films aimed primarily at helping Grades 5 to 7 to visualize the country as we know it today, and to develop geographical thinking.

Film structure (help for scanning the storyboards): Each 3-minute film module focuses on a different region of Canada. Each film has its own live-action segment at the start and end, for a personal relationship to that region. The five modular films reuse a common segment (60 seconds) to re-orient the viewer each time. The common segment is a fast rewind from the present location to the distant past before starting the forward time-lapse. The soundtrack and time-counter indicate the time-lapse speed, with obvious cues for slowing down and speeding up.

While each film covers the entire time period continuously, there is sequential emphasis, from film 1 to film 4, on progressively more recent periods, by slowing down and moving in to spend more time on the most interesting time period for that region, as follows:

- (1) East coast – The breakup of Pangea creates the Atlantic ocean.

- (2) West coast –Migrating island masses collide with Canada to create BC from ocean floor and build the Rockies.

- (3) Prairies – The ice ages cycle through as a series of many pulses.

- (4) Central Canada – The aftermath of the last ice pulse creates the Great Lakes, St Laurence, and Hudson Bay.

The first four films are fixed over Canada for half a billion years, but the fifth film reveals the extent of continental drift in an absolute reference frame of the whole Earth. Film 5 starts a billion years ago, includes major extinction events, and continues into the *future* for 250 million years more, to the third predicted supercontinent, finally speeding up to illustrate the Earth's ultimate fate.

Events are derived from many sources, including continental-drift reconstructions by Scotese 1997 and Dalziel 1999, and reconstructions of the western cordilleran region by Monger, 2001.

Evaluating Production Methods: I originally investigated many innovative ways of using the 3D animation software and rendering plug-ins of the day, eight years ago. Many of these approaches could still be relevant today. In addition, the animation can apparently now be done in a simpler, smarter way, creating it with scripting algorithms based on key frames of a whole Earth model, much like character animation. The script-generated animation can then be adjusted afterwards from another layer using control points. Software could be Maya.